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ABSTRACT

This paper describes an attempt to develop a teacher instrument for assessing competencies of public school principals and the subsequent "consequence validation" of its scales and items against school mediating and outcome variables. The competency assessment instrument described was one of several developed as part of the comprehensive Georgia Principal Assessment System through Project R.O.M.E. (Results Oriented Management in Education). A sample of 1,300 teachers from 35 elementary and 10 secondary schools in Georgia were asked to rate the frequency and effectiveness with which their principals performed on 117 performance indicators. These ratings were then correlated with measures of teacher attitudes toward the school environment, student perceptions of the school environment, student performance on standardized achievement tests, and average daily attendance. Results of the study indicated stronger and more frequent significant relationships between teachers' assessments of principals' behaviors and mediating variables (particularly teacher attitudes as measured by the "school survey" instrument) than between teachers' assessments and school outcome variables (student achievement and school average daily attendance). (Author/JG)

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TEACHER ASSESSMENTS OF PRINCIPALS PERFORMANCES: THEIR VALIDITY AND INDEPENDENCE OF SCHOOL SIZE AND OTHER CHARACTERISTICS

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(This article summarizes the development and validation of a teacher instrument to assess competencies of principals. The general model of Project ROME employed in the validation effort is presented; validity coefficients of various school criterion variables are given as well as partial correlation analyses that demonstrate independence. Implications for future validation studies are particularly important. Ed.)

EA 010 109

Competency-based education (CBE) is perhaps one of the most far-reaching movements in public education today, both in terms of its influence on the development of educational training models and its implications for state certification. In response to the larger society's demand for increased determining goals for key educational personnel at all levels. While much has already been accomplished in this vein with teachers, little has evolved for school administrators, particularly as regards competency assessment and validation research. Most developmental work in competency-based educational administration (CBEA) has limited its focus to the delineation of administrative competencies and their subsequent "verification" as professionally good and desirable through the consensus of expert opinion. Thus, lists of competencies for school principals deemed important for the effective operation of a school abound. Pool (1974), for example, cites over 50 different collections of competencies, duties, responsibilities, roles, etc., thought to be important for practicing school principals by those writing in the professional literature. If the movement towards CBEA is to avoid the pitfalls of other educational innovations, research must demonstrate the relationship between the assessment of principals' competencies and meaningful criterion variables derived from the school context.

This paper describes the first known attempt to develop a teacher instrument useful in assessing competencies of public school principals, and the subsequent "consequence validation" of its scales and items against school mediating and outcome variables. Within CBE, the concept of consequence validation implies that competency assessments should be first examined in terms of their relationships to other variables in the school context,... variables most logically affected by the performance of the competencies assessed. The process of consequence validation as conceived by the authors refers to establishing correlational relationships between assessed competence, characteristics of the school environment, and school outcome variables. As applied to the behavior of school principals, the consequence validity model assumed that principals' behavior impacts on student achievement and school average daily attendance (outcome variables) through the mediating factors of students' perception of characteristics of the school climate/learning environment and teachers' job-related satisfactions. The competency assessment instrument is one of several developed as part of a larger effort aimed at generating the more comprehensive Georgia Principal Assessment System (GPAS) through Project R.O.M.E. (Results Oriented Management in Education).

METHOD

Competency Development and Verification

An initial collection of 3,500 to 4,000 competencies deemed important by those writing in educational administration (Pool, 1974) was combined with information from an on-the-job time motion study of principal behavior (Ellett, et al., 1974) and objectives-based workshops with practicing school principals. This larger pool of competencies was reduced to a more manageable sum (N=306) of specific performance statements reflecting broad content and eliminating redundancy. These performance statements were subjected to a statewide verification survey to identify those competencies seen as most frequently important for the effective operation of a school and that discriminated between principals in terms of their operation of "exemplary" or "non-exemplary" programs in given functional areas of administrative responsibility. From this survey

80 highest rated and most discriminating competency statements were selected and used as a base for the subsequent development of 885 performance indicators.

The 885 performance indicators were then randomly assigned to eight instrument packages and subjected to a second statewide survey of 290 practicing school principals in the State of Georgia. Resulting from this process was a list of 338 performance statements rated as "highly desirable" and/or "essential" for effective school operation by at least 90% of the survey participants. These final competencies and performance indicators were then classified according to 1) most reliable data source (the principal, teachers, students, central office personnel, external observer), and 2) nature of administrative responsibility reflected in the content of each statement (Curriculum/Instruction, Staff Personnel, Pupil Personnel, etc.).

Instrumentation

Owing to the content of the 338 performance indicators, 117 were judged as being appropriate for assessment by teachers. The structure of the teacher instrument (Principal Performance Description Survey - Teacher Form) required that teachers make judgments about both the Frequency and Effectiveness with which their principal performed each competency using five-point rating scales. The first of these..FREQUENCY WITH WHICH PRINCIPAL PERFORMS TASK...allowed teachers to rate the corresponding performance indicator statement from 1--Never to 5--Very Often. The second teacher judgment for each of the 117 statements...EFFECTIVENESS WITH WHICH PRINCIPAL PERFORMS TASK...allowed for a second rating of an indicator from 1--Ineffective to 5--Very Effective. All 117 items were then randomly assigned to the PPDS-Teacher Form and administered to teachers in the sample schools as part of a comprehensive competency assessment system.

The distribution of the 117 items comprising the instrument classified by Functional Areas of Administrative Responsibility can be found in Table 1. An example of a performance indicator classified according to the Curriculum and Instruction functional area is provided below:

1. Discusses instructional objectives with individual teachers.

Validation Design

In order to establish data relevant to a "consequence validation" of the PPDS-Teacher From Instrument, two general classes of criterion variables were used. The first class represented what the authors term mediating variables, and consisted of teachers' perceptions of characteristics of their working environment and students' assessments of the school climate/learning environment. The instrument used to measure teacher attitudes toward dimensions of the school context was the School Survey developed by Coughlan and Cooke (1974), which contains the following 14 sub-scales: Administrative Practices, Professional Work Load, Non-Professional Work Load, Materials and Equipment, Buildings and Facilities, Educational Effectiveness, Evaluation of Students, Special Services, School-Community Relations, Supervisory Relations, Colleague Relations, Voice in Educational Program, Performance and Development, and Financial Incentives. Internal consistency reliability coefficients (Cronbach's Alpha) for this instrument within schools varied across scales for the sample investigated from .58 to .85, with a median coefficient of .71 (Pool, 1976).

The measure of student perceptions of characteristics of the school learning environment for secondary students was the Learning Environment Inventory (LEI) developed by Walberg and Anderson (1973). The LEI contains 15 seven-item subscales labeled as follows: Cohesiveness, Diversity, Formality, Speed, Environment, Friction, Goal Direction, Favoritism, Difficulty, Apathy, Democratic, Cliqueness, Satisfaction, Disorganization, and Competitiveness. Internal consistency coefficients reportedly range from .54 to .85 across scales, with a median reliability of .72 (Anderson, 1973).

The comparable school climate measure for elementary students was the My School inventory, an adaptation of Walberg and Anderson's (1968) My Class inventory. The My School instrument contains five nine-item scales labeled as follows: Satisfaction, Friction, Competitiveness, Difficulty, and Cohesiveness. Owing to the nature of the scoring procedure applied in this study, the interpretation of these scales relative to the scale labels should be reversed, e.g., Satisfaction = Dissatisfaction, etc. For the sample investigated in this study, internal consistency coefficients across scales varied from .41 to .73, with a median reliability of .57 (Perkins, 1976).

A second class of variables within the validation design (outcome variables) consisted of student scores on standardized achievement tests and school average daily attendance. For elementary students, achievement test scores were derived from the five subtests of the Iowa Tests of Basic Skills (ITBS). The subtests were measures of Vocabulary, Reading, Language, Work Study Skills, and Mathematics. For secondary students, Reading and Mathematics subtests of the Tests of Academic Progress (TAP) were used. The average daily attendance (ADA) figures, (expressed as a percentage of the maximum possible attendance), were derived for each sample school from the most recent twenty-day period coinciding with the time of actual data collection.

Sample

The sample for this study consisted of 35 elementary and 10 secondary schools in the State of Georgia, representing both rural and urban settings and a variety of socioeconomic backgrounds. Data were collected as part of a larger field test of the GPAS, a competency-based model for assessing and validating competencies of public school principals. Participants included 1,300 teachers, 3,350 elementary students (fourth and sixth grades), and 3,613 secondary students (grades eight and eleven).

Procedure

The School Survey and PPDS-Teacher Form were administered to teachers on a take-home basis allowing from three to five days for completion. Teachers were not identified except in terms of school, and were advised that their responses were contributed anonymously. Teacher groups across the school sample ranged in size from 12 to 55. The LEI and My School were administered to students to control for reading difficulty. School means for all instrumentation and criterion measures (outcome variables) were used as the units of statistical analysis.

RESULTS

Correlational data bearing on the multi-potential validity of the PPDS-Teacher Form instrument are summarized for elementary, secondary, and total

school samples in Table 1, which presents both the frequency of significant correlations and median correlation values between the PPDS-Teacher Form composites and the various mediating and outcome variables. A composite score for a given Functional Area of Responsibility consisted of the sum of teachers' frequency or effectiveness ratings for the items representing a given Functional Area of Administrative Responsibility. A description of major findings relevant to the consequence validation of the Teacher-PPDS instrument is presented in the separate sections that follow.

Relationships Between PPDS-Teacher Form Ratings and Mediating Variables

Observing the data in Table 1 (Note: All Tables are provided at the end of this article) for the PPDS-Teacher Form/School Survey intercorrelations, it appears that moderately strong relationships exist between teachers' assessments of principals' competencies in a variety of functional areas of administrative responsibility and teachers' general attitudes towards a variety of dimensions of their working environment. In comparing elementary, secondary, and total school samples, few significant relationships for the two teacher instruments were observed for the secondary schools, a result possibly due to the rather small sample size (n=10). The magnitude of the correlations was, however, encouraging. For the total sample it might be noted that 7 of the possible 12 Teacher-PPDS composites correlated significantly with at least 10 of the 14 School Survey dimensions, with the median correlations for the effectiveness ratings slightly larger than for the frequency of performance ratings. In addition, in contrasting data for the six functional areas composites of the Teacher-PPDS, the Staff Personnel composite seems to have the least in common with the School Survey factors. Viewed in global context, the data presented here support the relationship between teachers' assessments of the frequency and effectiveness with which principals perform a variety of competencies and teachers' attitudes towards their working environment. These findings are in a direction predicted by the consequence validity model previously discussed and tend to support the use of the School Survey as a mediating criterion measure in future competency validation studies.

Data derived from correlating Teacher-PPDS composite frequency and effectiveness ratings with dimensions of the LEI and My School yielded few significant results. The frequency of interscale correlations between the PPDS-Teacher Form and these measures of student perceptions of the school climate/learning environment was somewhat negligible. In comparing the Teacher-PPDS/My School and the Teacher-PPDS/LEI correlations, there is a tendency for the secondary sample correlations to be somewhat greater in magnitude, though not statistically significant at the .05 level. In summary, the results of correlating the PPDS-Teacher Form competency composites with the school climate/learning environment indices tends to negate the use of the student measures as part of the consequence validation design described above, though a unique combination of scales between the teacher and student attitude measures might be identified through more sophisticated multivariate analyses currently in progress.

Relationships Between PPDS-Teacher Form Ratings and Outcome Variables

The consequence validation design presented in this paper conceived of the principal's performance as impacting on student achievement and school average daily attendance (outcome variables) through the mediating factors of students' perceptions of characteristics of the school climate/learning environment and teachers' job related satisfaction or attitudes towards various dimensions of

their working environment. The right hand columns in Table I present the intercorrelation between the Teacher-PPDS composite ratings and student achievement and school average daily attendance for elementary, secondary, and total school groups.

With the exception of the effectiveness ratings for the Pupil Personnel and School-Community Interface composites, few significant correlations between the Teacher-PPDS instrument and student achievement measures were found for elementary and secondary schools. Of particular interest is the frequency of significant correlations betwen the effectiveness ratings of the Pupil Personnel composite and subtests of the ITBS for elementary schools. All five of the ITBS subtests were significantly correlated with this PPDS composite, with a median correlations of r=.40. This finding is interpreted as indicating a moderately strong relationship between teachers' assessments of the effectiveness with which principals perform tasks in the Pupil Personnel area and elementary student achievement in a variety of curriculum categories. In this regard, however, it might be mentioned that supplemental analyses of the ITBS subtests indicated a strong, positive relationship ranging from r=.91 to r=.98 between these scales for the sample elementary schools. In addition, 3 of 5 possible subtests correlated significantly with the effectiveness rating for the lone School-Community Interface item, ENCOURAGES TEACHERS TO INFORM PARENTS ABOUT SCHOOL PROGRAMS AND ACTIVITIES THROUGH STUDENTS, for the elementary sample.

For the secondary sample, no significant PPDS-Teacher Form composite/student achievement correlations were found, again possibly owing to the rather small secondary school sample. If any trend in these data exists at all, it appears that the relationship between teachers' assessments of principals' competencies and student achievement in secondary schools is mostly negative. In summary, few relationships were found between teachers' competency assessments of school principals and student achievement at either the elementary or secondary level in this study. These results were not as promising as hoped for, but tend to support the general assumptions of the consequence validity model when applied to principals' performances, and school mediating and outcome variables.

The last three columns in Table I present the actual intercorrelations between the PPDS-Teacher Form composites for both frequency and effectiveness ratings and school average daily attendance for elementary, secondary, and total school groups, respectively. In comparing the three samples, a significantly larger number of meaningful correlations appears for the total school group than for the elementary or secondary groups, possibly due to the increase in sample size. The frequency and effectiveness ratings for the Teacher-PPDS composites of Curriculum and Instruction, Staff Personnel, and Pupil Personnel showed significant correlations, moderate in magnitude, with school ADA for the total sample. Of interest is the negative relationship between these variables for the frequency and effectiveness ratings of the Staff Personnel composite. Apparently the more frequently and effectively principals perform Staff Personnel kinds of competencies (from the teachers' viewpoint), the lower is general school ADA. The results of the Pupil Personnel/ADA relationships, on the other hand, are reversed. Taken in toto, the process of relating teachers' assessments of principals' competencies to school ADA yields data supporting the use of ADA as an outcome variable in future consequence validation research with competency assessment instruments. When ADA and student achievement are contrasted as school outcome

criterion variables, it appears that ADA is a somewhat more predictable criterion from teachers' assessments of principals' competencies.

Supplemental Analyses to Test Assumptions of the Consequence Validation Model

It will be recalled that the consequence validation model generally assumed that principal performances impact on school outcome variables (student achievement and ADA) through the mediating influences of teacher and student perceptions of characteristics of the school working and learning environment, respectively. Summaries of the original (zero order) correlations between composites of the PPDS-Teacher Form instrument and the mediating and outcome variables investigated provided some support for assumptions of the validation model. Of all criterion variables examined in the initial analyses, the most predictable criterion was the School Survey instrument. Elementary and secondary student perceptions of characteristics of the school climate/learning environment (My School inventory and LEI) were not generally predictable from the Teacher-PPDS instrument.

To examine the generality (across school characteristics) of the initial relationships established between variables in the validation model, a series of partial correlation coefficients was computed to statistically control for school socioeconomic status (SES) and school size (SS). It was felt that these analyses would provide a clearer understanding of the generality of the established relationships across schools differing in SES and SS characteristics, and additional support for assumptions of the consequence validation model investigated.

For all partial correlation analyses undertaken, the SES index used was the percentage of students in each school receiving free school lunches. Specific criteria used in determining student qualification for free lunches were generally uniform across schools. Within the sample investigated, the SES percentage varied from 81% to 2%, with a mean equal to 28.3%. The school size index was derived from the total number of students in each school, and varied from 2,248 to 255 students, with a mean equal to 810 students.

Owing to the availability of data from additional schools, the sample size was increased for the partial correlation analyses by 7 elementary and/or 7 elementary and 13 secondary schools depending upon the particular variables investigated.

A summary of second-order partial correlation coefficients between composites of the PPDS - Teacher Form (Frequency and Effectiveness ratings) and dimensions of the School Survey is presented in Table 2. The sample for the analysis consisted of 42 elementary and 13 secondary schools. The correlation coefficients between subscales of the PPDS - Teacher Form and School Survey instruments represent relationships between the two instruments with the effects of SES and SS statistically controlled. While the individual subscale correlations are far too numerous to elaborate on here, several interesting statements can be made about this second-order partial correlation matrix.

First, it appears that the assumption of the consequence validity model proposed in this paper, that principals' performances impact on school outcomes through the mediating influences of teacher perceptions holds across

SES and SS characteristics. Apparently the strong relationships initially established between the PPDS - Teacher Form and School Survey instruments are relatively independent of SES and SS characteristics in the sample investigated. The second-order partial coefficients vary from moderate to quite large in magnitude, and show consistent directionality, in that teachers' positive perceptions of characteristics of their working environment (School Survey scores) coincide with positive perceptions of the frequency and effectiveness with which their principals' perform a wide variety of competencies in the school context. Considering the frequency and magnitude of significant second-order correlations, the least predictable School Survey scales appear to be Professional Work Load (PWL) and Buildings and Facilities (BAF). The most predictable School Survey scales are Administrative Practices (ADP), Special Services (SPS), Supervisory Relations (SVR), Voice in Educational Program (VEP), and opportunities for professional Performance and Development (PAD).

Given the large number of significant relationships betwen the two instruments, summary statements are somewhat difficult to make. However, the strongest relationships imply that teachers' assessments of the frequency and effectiveness with which principals' carry out professionally verified performances in Curriculum and Instruction and Staff Personnel areas are positively, and rather strongly related to their (teachers') attitudes towards administrative practices, supervisory relations, voice in determining content of the educational program, and opportunities for professional growth and development. These same general relationships were evident in the zero-order matrix between the two instruments, and make intiutive sense when conceptualizing the probable impact of principals' performances in these functional areas on particular teacher attitudes. It is interesting to note that 40 (24%) of the 168 possible intercorrelations between subscales of the two instruments remained essentially unchanged or slightly increased in magnitude when SES and SS were controlled, a finding possibly indicating the "suppressor" variable effects of the SES and SS indices.

The consequence validation model assumed that strong relationships would be found between the PPDS - Teacher Form and School Survey instruments. The original (zero-order) correlations between the two instruments in this study generally corroborated this assumption, and data in Table 2 provide strong support for the independence of the original relationships from SES and SS characteristics.

Within the consequence validation model described in this paper, student achievement and average daily attendance were conceptualized as school "outcome" criteria. The validation model assumed that more frequent and stronger relationships would be established between performance assessments (Teacher PPDS instrument) and the various "mediating" measures, than between mediating and outcome variables. A summary of zero, first, and second order partial correlations between dimensions of the School Survey and student achievement and average daily attendance is presented in Table 3. In order to increase sample size for these analyses, 7 elementary schools were added to the original sample of 35 elementary schools. A comparison of zero order correlation matrices and descriptive statistics for the two samples indicated that the 7 additional schools did not essentially alter sample characteristics.

When compared to data in Tables 1 and 2, the results in Table 3 generally corroborate assumptions of the consequence validation model, particularly when

SES and SS have been statistically controlled. In keeping with the model assumptions, various composites of the PPDS - Teacher Form instrument showed little relationship to the outcome variables of student achievement and average daily attendance (Table 1). Significant relationships between these outcome variables and the mediating measure of teacher perceptions of characteristics of the school working environment (School Survey) however, were established, though the second order partial correlations reduced the frequency and magnitude of the original (zero order) relationships considerably.

As regards specific relationships summarized in Table 3, the School Survey scales of Educational Effectiveness, Evaluation of Students, Colleague Relations, and Financial Incentives show particular promise in terms of their association with student achievement at the elementary school level. The relationships between teachers' attitudes towards these particular dimensions of their working environment and student achievement were reduced by controlling for SES and SS. In comparing the effects of these two school demographic variables, the School Survey/student achievement correlations seem more independent of SS characteristics than those associated with SES. These data tend to support the conclusion that positive teacher attitudes towards general educational effectiveness, the schools' programs for evaluating student progress, relationships with professional colleagues, and financial incentives (salary) are positively related to student achievement, and that these relationships are relatively independent of SES and SS characteristics.

The right-hand columns of Table 3 summarize the zero, first, and second order correlations between the outcome variable of ADA and dimensions of the School Survey. The School Survey scales showing the most consistent relationships with the ADA variable were Educational Effectiveness, Evaluation of Students, and Non-Professional Work Load. The relationships between teachers' attitudes towards these dimensions of their working environment and school ADA were not dramatically reduced when SES and SS were statistically controlled.

In comparing the two outcome variables in Table 3, it appears that student achievement has generally more in common with teacher attitudes (as measured by the School Survey) than school ADA. Though the absolute magnitude of the correlations reported in Table 3 is not extremely large, they do provide additional support for assumptions of the consequence validation model since they vastly exceed those established between the PPDS - Teacher Form (principal performance assessment) instrument and these same outcome variables (Table 1).

DISCUSSION

A critical element in any competency-based education model, whether designed for teachers, principals, or other educational personnel, is the development and refinement of an evaluation or assessment system that reliably measures competencies deemed important for effective, on-the-job performance. While some reliable competency assessment devices are available, few have been validated against school "mediating" and "outcome" variables through large scale field research. The absence of such investigations in CBEA is perhaps due to difficulties in accumulating school samples large enough to yield "faith in the results." Since the focus in such studies is the school principal, school means, of necessity, must be used as the units of statistical analysis, requiring a rather large amount of data collection. Such research is both costly and time consuming, and represents a stopping place for many developmental projects in CBEA.

This paper provides some positive advances in developing instrumentation for assessing competencies of school principals, and presents strong support for the general validity of teachers' ratings of principals' performances (competencies). Data reported in this paper support the assumption of the consequence validation paradigm proposed, in that teachers, in fact, view the principal as impacting on them and multiple dimensions of their working environment.

Major results of the study indicated stronger and more frequently occurring, significant relationships between teachers' assessments of principals' behaviors and mediating variables (particularly teacher attitudes as measured by the School Survey), than between these same assessments and school "outcome" variables (student achievement and school average daily attendance). Results did not support the notion that principals' behaviors have a direct impact on student perceptions of school climate characteristics or student achievement. This finding is considered important in conceptualizing the principals' role in the school organization since past research studies (Walberg & Anderson, 1968; Anderson & Walberg, 1968; Anderson, 1970) have demonstrated the predictability of student learning outcomes from students' perceptions of school climate/learning environment characteristics. Through their daily functioning, principals may indeed set a "tone" for the educational environment that either fosters or inhibits student growth (learning). However, it appears that these influences impact more directly on teachers and their attitudes, which subsequently engender student attitudes conducive to learning.

As concerns the specific rating scales used on the teacher instrument to assess principals' competencies, it appears that "effectiveness" ratings are perhaps slightly more valid than "frequency" ratings. From the teachers' point of view, how well a principal performs a variety of behaviors may be more critical than how often he/she performs these same behaviors. While many significant relationships between frequency ratings and mediating variables were found, those for effectiveness ratings yielded slightly higher, and more frequently occurring correlations.

Supplemental first and second order partial correlation analyses served to reduce the initial correlations between variables in the validation design, but adequately demonstrated the relative independence of the established relationships from the demographic characteristics of school socioeconomic status (SES) and school size (SS). When these analyses were undertaken, SES accounted for a larger reduction in common variation between the various variables investigated than did SS. Apparently SES is a more important school characteristic to control when using school means as the units of statistical analysis, as was the case in the present study. Or, it may more simply be that the relationships established between teacher assessments of principals' competencies and the criteria investigated are generally more independent of SS than SES characteristics.

Considering all of the separate analyses undertaken to validate the principal competency assessment instrument for teachers, it appears that the impact of principal behavior on the school outcomes of student achievement and average daily attendance is "mediated" by other factors in the school context, particularly teacher attitudes. While the statistical analyses undertaken in this study are not sufficient to structure a high inference "causal" model for the variables investigated, they do suggest this as a future possibility. A general

"path" analysis technique applied to variables in the consequence validity model, for example, might well yield data allowing one to more directly link and better understand the complex relationships between principals' performances, teacher and student perceptions of school climate characteristics, and their subsequent impact on student achievement and attendance. When combined with the results of other major educational research efforts, the importance of the principal in the school organization might be further specified.

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TABLE I

Summary of Frequency of Significant Correlations (f) and Median Correlation Values (r) Between PPDS-Teacher Form Composites by Functional Area of Administrative Responsibility (Frequency and Effectiveness Ratings) and Mediating. and Outcome Measures for Elementary (E=35), Secondary (S=10) and Total (T=45) School Samples

	School Survey						My School		LEA		Std. Tests				ADA[3]		
	E		(14)[2] S		T		(5) E		(15) S		(5) E		(2) S		E	S	T
PPDS-Teacher Form Composites	f	r	f	r	f	r	f	r	f	r	f	r	f	r	r	r	r
Curriculum and Instruction (35)[1]																	
Frequency	7	.40*	5	.60	11	.45*	0	.25	0	.48	0	.10	0	-.27	.10	.68*	.40*
Effectiveness	10	.50*	8	.72*	11	.54*	0	.20	0	.35	0	.27	0	-.23	.15	.53	.37*
Staff Personnel (40)																	
Frequency	10	.44*	3	.55	2	.17	0	.21	0	.09	0	.21	0	-.22	.11	-.63	-.46*
Effectiveness	2	.24	1	.48	7	.27	0	-.02	0	.10	0	-.23	0	-.24	-.13	-.64	-.30*
Pupil Personnel (17)																	
Frequency	8	.40*	3	.57	12	.45*	1	.27	2	.49	1	.28	0	-.38	.14	.48	.44*
Effectiveness	9	.43*	7	.62	11	.51*	2	.30	1	.46	5	.40*	0	-.45	.23	.47	.43*
School Community Interface (1)																	
Frequency	5	.27	1	.27	8	.32*	0	.16	0	.41	0	.15	0	-.07	-.03	.45	.16
Effectiveness	9	.45*	2	.51	9	.51*	0	.25	0	.41	3	.35*	0	-.10	.09	.54	.32*
Fiscal Management (9)																	
Frequency	9	.35*	4	.46	10	.40*	1	.21	0	.25	0	.27	0	.10	.13	.45	.17
Effectiveness	9	.41*	4	.62	10	.43*	1	.25	0	.21	2	.32	0	.05	.17	.33	.17
System-wide Policies and Operations (15)																	
Frequency	6	.27	2	.52	9	.32*	0	.18	0	.30	0	.04	0	-.03	.02	.50	.20
Effectiveness	10	.42*	7	.65	12	.49*	2	.21	0	.29	0	.25	0	-.07	.15	.49	.25

[1] Number of items in PPDS-Teacher Form composite

[2] Number of scales on instrument

[3] ADA correlations are actual, not median values

[4] Correlation significantly different from zero ($p < .05$) for given sample size

TABLE 2

Summary of Second Order Partial Correlation Coefficients Between Composites of the Principal Performance Description Survey - Teacher Form (Frequency and Effectiveness Ratings) and Dimensions of the School Survey (N=42 elementary and 13 secondary schools)[1]

	School Survey Dimensions												
Teacher PPDS Composites	ADP	PWL	NPW	MAE	BAF	EDF	EOS	SPS	SCR	SVR	COR	VEP	PAD	FIN
1. Curriculum and Instruction (35)[2]														
Frequency	.58*[3]	.24*	.31*	.35*	.16	.40*	.45*	.58*	.40*	.61*	.46*	.61*	.76*	.18
Effectiveness	.62*	.21	.26*	.33*	.14	.48*	.54*	.56*	.44*	.70*	.54*	.59*	.73*	.13
2. Staff Personnel (40)														
Frequency	.58*	.21	.26*	.37*	.20	.37*	.39*	.58*	.47*	.53*	.53*	.55*	.80*	.39*
Effectiveness	.65*	.22*	.26*	.37*	.17	.47*	.50*	.57*	.53*	.66*	.61*	.59*	.79*	.28*
3. Pupil Personnel (17)														
Frequency	.59*	.19	.22*	.28*	.09	.44*	.43*	.47*	.49*	.55*	.43*	.53*	.72*	.25*
Effectivness	.28*	.21	.25*	.29*	.11	.50*	.51*	.48*	.44*	.67*	.49*	.56*	.71*	.15
4. School-Community Interface (1)														
Frequency	.28*	-.06	-.04	.15	-.21	.18	.16	.28*	.22*	.37*	.36*	.26*	.44*	.05
Effectiveness	.40*	-.06	-.05	.11	-.11	.41*	.35*	.23*	.34*	.52*	.37*	.32*	.43*	-.03
5. Fiscal Management (9)														
Frequency	.30*	.11	.06	.24*	.05	.26*	.33*	.46*	.23*	.46*	.26*	.50*	.49*	.22*
Effectiveness	.31*	.09	.07	.27*	.08	.35*	.40*	.42*	.22*	.53*	.33*	.48*	.48*	.19
6. System-wide Policies and operations (15)														
Frequency	.55*	.14	.20	.28*	.08	.30*	.31*	.48*	.44*	.53*	.42*	.67*	.75*	.35*
Effectiveness	.56*	.22*	.26*	.31*	.16	.42*	.41*	.52*	.38*	.68*	.46*	.66*	.74*	.26*

[1] School Means used as the units of statistical analysis

[2] Number of items on PPDS-Teacher Form Composite

[3] Second order partial correlations computed by controlling for socioeconomic status and school size

* Correlation significantly different from zero ($p < .05$)

TABLE 3

Summary of Zero, First, and Second Order Partial Correlation Coefficients
Between Dimensions of the School Survey and Student Achievement and Average Daily Attendance
(n=42 Elementary Schools)[1]

	ITBS Battery Total			Average Daily Attendance		
School Survey Factors	Zero Order	1st Order[2]	2nd Order[3]	Zero Order	1st Order	2nd Order
1. Administrative Practices	.48*	.28*	.24	.34*	.25*	.19
2. Professional Work Load	.49*	.20	.19	.38*	.28*	.29*
3. Non-Professional Work Load	.39*	.20	.18	.38*	.31*	.30*
4. Materials and Equipment	.34*	.09	.10	.16	.05	.08
5. Buildings and Facilities	.44*	.24	.27*	.25*	.16	.22
6. Educational Effectiveness	.77*	.52*	.49*	.54*	.49*	.46*
7. Evaluation of Students	.67*	.44*	.43*	.50*	.43*	.42*

[1] School means used as the units of statistical analysis

[2] First order computed by controlling for school socioeconomic status

[3] Second order computed by controlling for school socioeconomic status and school size

* Correlation significantly different ($p < .05$) from zero

TABLE 3 (Cont.)

School Survey Factors	ITBS Battery Total			Average Daily Attendance		
	Zero Order	1st Order[2]	2nd Order[3]	Zero Order	1st Order	2nd Order
8. Special Services	.58*	.24	.26*	.11	-.08	-.06
9. School-Community Relations	.45*	.27*	.25*	.23	.14	.09
10. Supervisory Relations	.24	.22	.19	.27*	.24	.18
11. Colleague Relations	.61*	.41*	.37*	.31*	.20	.09
12. Voice in Educational Program	.31*	.12	.08	.33*	.26*	.21
13. Performance and Development	.37*	.20	.19	.20	.12	.09
14. Financial Incentives	.55*	.43*	.42*	.02	-.10	-.15

[1] School means used as the units of statistical analysis

[2] First order computed by controlling for school socioeconomic status

[3] Second order computed by controlling for school socioeconomic status and school size

* Correlation significantly different ($p < .05$) from zero

Composites and Sample Items for the Principal Performance Description Survey - Teacher Form Administered to Elementary and Secondary Teachers

Functional Areas of Responsibility Composites	Sample Item
1. Curriculum and Instruction (35)[1]	Discusses student performance criteria with teachers in individual conferences
2. Staff Personnel (4)	Establishes a teacher committee to evaluate school's operation
3. Pupil Personnel (17)	Develops individualized instruction programs based on student interests
4. School-Community Interface (1)	Meets with teachers to discuss parental and community opinion about the school and its programs
5. Fiscal Management (9)	Plans budget on projected needs data obtained from staff
6. System-wide Policies and Operations (15)	Appoints staff committee to make recommendations for procedures to implement system goals in the school

[1] Number of items in composite

Subscales and Sample Items of the School Survey Administered to Elementary and Secondary Teachers

Scales	Sample Item
1. Administrative Practices (9)[1]	"The administration seems willing to give careful consideration to our ideas and suggestions."
2. Professional Work Load (9)	"I am asked to spend too much time in meetings around here."
3. Non-Professional Work Load (6)	"I receive sufficient clerical assistance to do my job effectively."
4. Materials and Equipment (8)	"The instructional materials provided for me here are very satisfactory."
5. Buildings and Facilities (7)	"The layout of this school is inconvenient for the staff."
6. Educational Effectiveness (10)	"In my opinion, adequate educational standards are being upheld in this school."

Scales	Sample Item
7. Evaluation of Students (10)	"Students' absences are excessive in this school."
8. Special Services (8)	"Our library services for students are very satisfactory."
9. School-Community Relations (7)	"In general, I approve of school board policies."
10. Supervisory Relations (10)	"I seldom get the help I need in handling difficult discipline cases."
11. Colleague Relations (7)	"People in my school cooperate well."
12. Voice in Educational Program (8)	"I should have a greater voice in selecting students' textbooks and reference material."
13. Performance and Development (10)	"I think my work performance is judged fairly here."
14. Financial Incentives (9)	"I feel our salary system adequately rewards outstanding work."

Subscales and Sample Items of the Learning Environment Inventory Administered to Secondary Students

Scales	Sample Items
1. Cohesiveness	Members of the class are personal friends
2. Diversity	The class divides its efforts among several purposes.
3. Formality	Students are asked to follow a complicated set of rules.
4. Speed	The class has difficulty keeping up with its assigned work.
5. Environment	The books and equipment students need or want are easily available to them in the classroom.
6. Friction	Certain students are considered uncooperative.
7. Goal Direction	The objectives of the class are specific.
8. Favoritism	Only the good students are given special projects.
9. Difficulty	Students are constantly challenged.
10. Apathy	Members of the class don't care what the class does.

Scales		Sample Items
11.	Democratic.	Class decisions tend to be made by all the students.
12.	Cliqueness.	Certain students work only with their close friends.
13.	Satisfaction.	Students are well-satisfied with the work of the class.
14.	Disorganization	The class is disorganized.
15.	Competitiveness	Students compete to see who can do the best work.

[1]Number of items in subscale

Subscales and Sample Items of the My School Inventory Administered to Elementary Students

Scales		Sample Item
1.	Satisfaction.	"Most pupils are pleased with my school."
2.	Friction.	"Many children in my school like to fight."
3.	Competitiveness	"Some pupils always try to do their work better than the others."
4.	Difficulty.	"Only the smart pupils can do their work."
5.	Cohesiveness.	"In my school I like to work with others."

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